

CLAIMS

1. A picture coding method for coding a picture signal on a picture-by-picture basis so as to generate a bit stream, the method comprising:

5 a coding step of coding a parameter set to be used for decoding all pictures included in an access unit made up of a plurality of pictures ; and

a parameter set placement step of placing, in each access unit in the bit stream, the parameter set coded in the coding step.

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2. The picture coding method according to Claim 1, wherein the parameter set includes picture parameter sets to be used for decoding one or more pictures, and

the picture coding method further comprises

15 a parameter identification information placement step of placing parameter identification information before a codeword for pixels of a picture in the bit stream, the parameter identification information indicating a picture parameter set for the picture.

20 3. The picture coding method according to Claim 2, wherein in the parameter set placement step, the parameter set is placed before any of the pictures in the access unit in the bit stream.

25 4. The picture coding method according to Claim 3, further comprising

a structure identification information generation step of generating structure identification information indicating a placement of the parameter set.

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5. The picture coding method according to Claim 2, wherein the parameter set includes: a plurality of the picture

parameter sets; and a sequence parameter set to be used in common for decoding all the pictures included in the access unit, and

5 in the parameter set placement step, the sequence parameter set is placed in a head side of the access unit in the bit stream, and a picture parameter set for a picture included in a sub access unit is placed in the sub access unit in the bit stream, the sub access unit being obtained by dividing the access unit.

10 6. The picture coding method according to Claim 5, further comprising

a structure identification information generation step of generating structure identification information indicating a placement of the parameter set.

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7. The picture coding method according to Claim 6, wherein in the structure identification information generation step, the structure identification information is generated and then included in the bit stream.

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8. The picture coding method according to Claim 6, wherein in the structure identification information generation step, the structure identification information is generated and then attached to the bit stream.

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9. The picture coding method according to Claim 2, wherein the parameter set includes a plurality of picture parameter sets, and

30 in the parameter set placement step, a picture parameter set for a picture is placed before the picture in the access unit in the bit stream.

10. The picture coding method according to Claim 9,
wherein in the parameter set placement step, a picture
parameter set for a picture is placed immediately before the
picture in the access unit in the bit stream, except for a picture
5 parameter set that is already placed.

11. The picture coding method according to Claim 9,
wherein in the coding step, either any or all of the picture
parameter sets are coded for plural times, and a plurality of same
10 coded picture parameter sets are generated, and
in the parameter set placement step, the plurality of same
picture parameter sets coded in the coding step are placed in the
same access unit.

12. The picture coding method according to Claim 11,
wherein the parameter set includes a sequence parameter
set to be used in common for decoding all the pictures included in
the access unit,
in the coding step, the sequence parameter set is coded for
20 plural times, and a plurality of same coded sequence parameter
sets are generated, and
in the parameter set placement step, the plurality of same
sequence parameter sets coded in the coding step are placed in the
same access unit.

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13. A picture coding method for coding a picture signal on a
picture-by-picture basis so as to generate a bit stream, the method
comprising:

a coding step of coding a parameter set to be used for
30 decoding all pictures included in an access unit, except for a picture
that refers to a picture in another access unit and is not displayed
when random access is performed, the access unit being made up

of a plurality of pictures; and

a parameter set placement step of placing, in each access unit in the bit stream, the parameter set coded in the coding step.

5 14. A bit stream that includes a plurality of access units which is obtained by coding a picture signal on a picture-by-picture basis, the access unit being made up of a plurality of coded pictures,
wherein a parameter set is placed in the access unit, the parameter set being used for decoding all the pictures included in
10 the access unit.

15. The bit stream according to Claim 14,
wherein the parameter set is placed before any of the pictures in the access unit.

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16. The bit stream according to Claim 14,
wherein the parameter set includes: a plurality of picture parameter sets to be used for decoding one or more pictures; and a sequence parameter set to be used in common for decoding all
20 the pictures included in the access unit,
the sequence parameter set is placed in a head side of the access unit, and

a picture parameter set for a picture included in a sub access unit, out of the plurality of picture parameter sets, is placed in the
25 sub access unit, the sub access unit being obtained by dividing the access unit.

17. The bit stream according to Claim 16,
wherein the bit stream includes structure identification
30 information indicating a placement of the parameter set.

18. The bit stream according to Claim 16,

wherein structure identification information is attached to the bit stream, the information indicating a placement of the parameter set.

5 19. The bit stream according to Claim 14,
wherein the parameter set includes a plurality of picture parameter sets to be used for decoding one or more pictures, and each of the picture parameter sets is placed before the corresponding picture.

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20. The bit stream according to Claim 19,
wherein the picture parameter set is placed immediately before the corresponding picture, except for a case in which the picture parameter set is already placed in a head side of the access unit.

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21. A program for coding a picture signal on a picture-by-picture basis so as to generate a bit stream, the program causing a computer to execute the following:

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a coding step of coding a parameter set to be used for decoding all pictures included in an access unit made up of a plurality of pictures; and

a parameter set placement step of placing, in each access unit in the bit stream, the parameter set coded in the coding step.

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22. The program according to Claim 21,
wherein the parameter set includes: a plurality of picture parameter sets to be used for decoding one or more pictures; and a sequence parameter set to be used in common for decoding all the pictures included in the access unit,

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in the parameter set placement step, the sequence parameter set is placed in a head side of the access unit in the bit

stream, and a picture parameter set for a picture included in a sub access unit is placed in the sub access unit in the bit stream, the sub access unit being obtained by dividing the access unit.

- 5 23. A picture coding apparatus for coding a picture signal on a picture-by-picture basis so as to generate a bit stream, the apparatus comprising:

10 a coding unit operable to code a parameter set to be used for decoding all pictures included in an access unit made up of a plurality of pictures; and

a parameter set placement unit operable to place, in each access unit in the bit stream, the parameter set coded by the coding unit.